

Atty.
Dkt. No.

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Client Ref.

273686

F00-219-US-DIV-3

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: **MANABE et al.**

Div. of Appln. No.: **09/417,778**

Filing Date: October 14, 1999

Examiner: Minh Loan Tran

Group Art Unit: 2811

Date: OCTOBER 2, 2000

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Sum	AR 5,278,433	1/1994	Manabe et al.			
	BR 4,844,989	07/89	Murdock			
	CR 4,408,217	10/83	Kobayashi			
	DR 4,268,842	05/81	Jacob et al.			
	ER 5,005,057	04/91	Izumiya et al.			
	FR 4,614,961	09/86	Khan et al.			
	GR 4,153,905	05/79	Charmakedze et al.			
	HR 4,855,249	08/89	Akasaki et al.			
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	KR 4,396,929	08/83	Ohki et al.			
	LR 5,006,908	04/91	Natsuoka et al.			
	MR 4,608,581	08/86	Bagratishvili et al.			
Sum	NR 4,473,938	10/84	Kobayashi et al.			

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								Enclosed	No	Enclose	No
Sum	OR	2-229475	09/1990	Japan					x		x
	PR	2-275682	11/1990	Japan					x		x
	QR	5-042785	04/1975	Japan					x		x
	RR	59-228776	12/1994	Japan					x		x
	SR	0 620 203 A1	10/1994	Europe	Nakahata				x		x
	TR	0-277597	08/1988	EPA					x		x
	UR	03-034549	02/1991	Japan	Toyoda				x		x
	VR	34549	02/1991	Japan	Hatano				x		x
	WR	4,006,449	09/1990	Germany	Manabe				x		x
Sum	XR	57-018377	01/1982	Japan	KOBAYASHI				x		x

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

Sum	YR	English Abstract of OKI Japanese Application Published 9/22/82 under No. 57-153479.			
	ZR	I. Akasaki et al., "Effects of AIN Buffer Layer on Crystallographic Structure... by MOVPE", J. Crystal Growth 98 (1989) pp. 209-19.			
	AAR	Liu et al., "Growth morphology and surface-acoustic-wave measurements of AIN films on Sapphire," Journal of Applied Physics, Vol. 46, No. 9, September 1975, pages 3703-3706.			
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	NR	61-007671	01/1986	Japan	Kawabata				x		x
	OR	57-087184	05/1982	Japan	Tabuchi				x		x
	PR	57-153479	09/1982	Japan	Ooki				x		x
	QR	2-738329	03/1978	Germany	Jacob et al.				x		x
	RR	56-59699	05/1981	Japan	Ooki				x		x
	SR	34549	02/1991	Japan	Hatano				x		x
SM	TR	3-046018	09/1981	Germany	Kobayashi et al.				x		x

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SM	UR	Koide et al. "Effect of an AlN Buffer layer on AlGaNa-Al2O3 Heteroepitaxial Growth by MOVPE", Japanese Journal of Crystal Growth 1986, Vol. 13, No. 4, pp. 218-225.									
	VR	Sayyah et al. "The Influence of TMA and SiH4 on the Incorporation Rate of GaInAlxGa1-xN Crystals Grown from TMG and NH3", Journal of Crystal Growth 77 (1986), pp. 424-429 North-Holland, Amsterdam.									
	WR	Bottka, et al., Silicon and beryllium doping of OMVPE Grown..., Journal of Crystal Growth 68 (1984) pp. 54-59, North-Holland Amsterdam									
	XR	Madar et al., "Growth Anisotropy in the GaN/Al2O3 System," Journal of Crystal Growth 40, 1997, pages 239-252.									
	YR	Koide et al., "Epitaxial Growth and Properties of AlxGa1-xN by MOVPE, Reprinted from Journal of the Electrochemical Society, Vol. 133, No. 9, September 1996, pp. 1956-1960									
SM	ZR	Boulou et al., "Light emitting Diodes Based on GaN", Philips Tech. Rev., 37, 237-240 No. 9/10, 1977.									

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	NR	2623466	2/1990	Japan	Sassa et al.				x		x
	OR	59-228776	6/1983	Japan	Maefutsu et al.				x		x
	PR	60-173829	2/1984	Japan	Maefutsu et al.				x		x
	QR	1-589351	05/1981	England							
	RR	63-188977	08/1988	Japan							
	SR	62-119196	05/1987	Japan							
	TR	57-046669	10/1982	Japan							
SM	UR	03-034549	02/1991	Japan							
	VR	54-071589	06/1979	Japan	Toyoda						

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SM	WR	English Abstract of OOKI Japanese Application Published 9/19/82 under No. 57-153479.									
	XR	I. Akusuki et al., "Effects of AlN Buffer Layer on Crystallographic Structure... by MOVPE", J. Crystal Growth 98 (1989) pp. 209-19.									
	YR	Sayyah, A Study of Growth Mechanisms and Electrical and Optical Properties of Epitaxial Al _x Ga _{1-x} N Layers Grown by Atmospheric Pressure Metalorganic Chemical Vapor Deposition, A Dissertation presented to Faculty of the Graduate School, University of Southern California, February 1986, pp. 125-136.									
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		Document Number	Date MM/YYYY	Country	Inventor Name	Class	SubClass	English Abstract		Translation Readily Available	
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SM	MR	58-046686	03/1983	Japan	Yoneda				x		x
	NR	54-071590	06/1979	Japan	Toyoda				x		x
	OR	02-081482	03/1990	Japan	Manabe				x		x
	PR	02-081483	03/1990	Japan	Manabe				x		x
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	TR	Kiyoshi Takahashi, Semiconductor Engineering: Basic Characteristics of Semiconductor, Morikita Electric Engineering Series, Vol. 4, Chapter 14: Semiconductor Material Technics, 14:1: Forming of Semiconductor Material, August 1, 1975, p. 297.									
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	VR	Sano et al., Properties of III-V Nitride Semiconductors, Japanese Journal of Applied Physics, Vol. 52, No. 5, 1983, pp. 374-387.									
	WR	Miyoshi Haradome, Basics of Semiconductor Engineering, Chapter 8: Compound Semiconductor, 8:1, Conditions to be Semiconductor, August 30, 1967, p. 161.									
GA	XR	A.S. Grove, Physics and Technology of Semiconductor, Chapter 4: Basics of Semiconductor Physics, 1967, translated and published in Japan June 23, 1995, pp. 112-123.									

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	LR										
	MR										
	NR										
	OR										
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	VR	Pankove et al., Optical Absorption of GaN, Applied Physics Letters, Vol. 17, No. 5, September 1970, pp. 197-198.
	WR	Amano et al., Effects of the Buffer Layer in Metalorganic Vapour Phase Epitaxy of GaN on Sapphire Substrate, Thin Solid Films, 163, (1988), pp. 415-420.
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	AAR	Hiramatsu et al. "Effects of Buffer Layer in MOVPE Growth of GaN Film on Sapphire Substrate" Japanese Journal of Crystal Growth, 1988, Vol. 15, No. 3&4, pp. 334-342
SM	BBR	Elwell et al. "Crystal Growth of Gallium Nitride" Prog. Crystal Growth and Charact. 1988, vol. 17, pp. 53-78.
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